

EDITORIAL

Rate of Suicide Among Women Nurses Compared With Women in the General Population Before the COVID-19 Global Pandemic

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In this issue of *JAMA Psychiatry*, Davis et al¹ have identified a population at high risk for suicide that warrants immediate attention. In a large retrospective cohort study of 159 372 suicides from 2007 to 2018 in the United States, sex-specific suicide incidence rates among nurses, physicians, and the general population were estimated using data from the National Violent Death Reporting System and workforce data from the United States Bureau of Labor Statistics and Association of American Medical Colleges' State Physician Workforce Data. Findings indicate that suicide rates among nurses exceed those of people in the general population and that female nurses are at twice the risk for suicide compared with women in the general population.

The Davis et al study findings¹ are particularly concerning given that they predate the COVID-19 global pandemic and its exacerbation of 2 well-known risk factors for suicide among health care workers: work-related stressors and mental health problems.² Under current COVID-19 working conditions, health care professionals are experiencing extremely high levels of stress and mental health problems. A 2020 systematic review³ of studies examining the prevalence of mental health problems in health care workers since the start of the COVID-19 pandemic demonstrates that the prevalence of anxiety, depression, and stress among health care workers are 24.1% to 67.5%, 12.1% to 55.9%, and 29.8% to 62.9%, respectively. The highest level of psychological distress identified in this systematic review was among nurses, women workers, frontline health care workers, younger medical staff, and workers in areas with higher infection rates. Taken together, these findings suggest that the national trends in suicide among nurses are greater than the general population and are potentially increasing in the context of the COVID-19 global pandemic.

Contrary to most prior studies, the Davis et al study¹ does not demonstrate that physicians in the United States are at greater risk for suicide compared with the general population, save for female physicians in 2011/2012. Davis et al make a convincing argument that many of the studies demonstrating a greater risk for suicide among physicians compared with the general population were conducted among physicians in countries other than the United States and may account for differences in rates of suicide. Further, they argue that studies conducted with physicians in the United States are outdated and have limited generalizability. The Davis et al findings for male physicians are consistent with one similar study conducted in the United States,¹ but it is important to note

that the Davis et al study¹ did not include physicians younger than 30 years and therefore excluded most physicians in training such as interns and residents. Early residency training has been identified as a time of added risk for depression, burnout, and suicide,⁴ with suicide being the first and second leading causes of death for male and female physicians in training, respectively.⁵ Future studies, including all groups of physicians using age-adjusted comparisons between men and women in the general population, are warranted and may yield important information about high-risk groups by age and sex.

A comprehensive and integrated approach is needed to make a significant effect on suicide risk reduction in health care professionals in general and nurses in particular. There is no singular, clear, evidence-based road map to achieve this end, but as with any complex public health issue, there is a strong precedent to support the use of a tiered public health prevention and treatment approach.⁶ Public health prevention and treatment approaches apply early preventive efforts, identification of at-risk individuals, and targeted treatments for those in need. This framework is an effective model to guide the development of strategies to manage workplace stress and reduce the effect of mental health problems. For example, preventive strategies can include the promotion of health and wellness among employees and affording the time needed to engage in health-related activities as part of one's professional responsibility. Increased employee engagement in preventive strategies is supported when leaders also engage in and model health-promoting activities. Confidential mental health screenings can be used to identify high-risk individuals or groups so that appropriate supports and resources can be made available and treatment can be reserved for those in need of evidence-based treatments for mental health or substance use disorders. Targeted approaches can also include those informed by examining specific workplace stressors, such as harassment and or policy changes that may have exacerbated work conditions such as changes in nurse-to-patient ratios, shift length, and untenable schedules. In parallel to adopting this framework, we need to acknowledge and overcome the stigma associated with mental health problems within the culture of medicine and the silence and inaction that prevents the successful adoption of preventative and treatment interventions among health care professionals. In addition to the individual mental health benefits of such interventions, there are tremendous organizational benefits, such as decreased absenteeism, reduced turnover and improved performance, a positive effect on quality of care and patient safety, and reduced health care costs.⁷

In designing and implementing interventions to alleviate proximal risk factors for suicide in nurses and physicians (ie, workplace stressors and mental health problems), it is important to acknowledge and address the burden of the health care workforces' second shift⁸: the never-ending, uncompensated, and often devalued domestic labor that is carried primarily by women, who make up 88% of the nursing workforce and half of all physicians.⁹ Balancing increased work demands during the pandemic while schools are closed and childcare options have vanished has created even greater work-family conflict for nurses and physicians. Work-family conflict was already well known to nurses and physicians prior to the pandemic and has been associated with an increased risk for burnout, depression, and attrition from the workforce.¹⁰ Systemic modifications that alleviate the burden of the second shift and work-family conflict are greatly

needed. Pilot programs designed to ease work-family conflict by providing childcare, free home-delivered meals, or housecleaning are in their infancy. These programs should be expanded in scope and number and rigorously tested to reduce work-family conflict as well as depression and its consequences such as suicide, poor quality of patient care, and career attrition.¹⁰

Given that nurses alone make up the largest number of health care workers in the United States and are the backbone of patient care and the health care industry, we cannot afford to ignore the mental health and workplace stressors health care professionals endure. The Davis et al findings¹ serve as a call to action by health care systems and leaders to address the proximal risk factors for suicide and improve the mental health and lives of our health care workforce and, in turn, the patients they serve.

ARTICLE INFORMATION

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REFERENCES

1. Davis MA, Cher BAY, Friese CR, Bynum JPW. Association of US nurse and physician occupation with risk of suicide. *JAMA Psychiatry*. Published online April 14, 2021. doi:10.1001/jamapsychiatry.2021.0154
2. Davidson JE, Proudfoot J, Lee K, Terterian G, Zisook S. A Longitudinal analysis of nurse suicide in the United States (2005-2016) with recommendations for action. *Worldviews Evid Based Nurs*. 2020;17(1):6-15. doi:10.1111/wvn.12419
3. Vizheh M, Qorbani M, Arzaghi SM, Muhidin S, Javanmard Z, Esmaili M. The mental health of healthcare workers in the COVID-19 pandemic: a systematic review. *J Diabetes Metab Disord*. 2020;19(2):1-12. doi:10.1007/s40200-020-00643-9
4. Mata DA, Ramos MA, Bansal N, et al. Prevalence of depression and depressive symptoms among resident physicians: a systematic review and meta-analysis. *JAMA*. 2015;314(22):2373-2383. doi:10.1001/jama.2015.15845
5. Yaghmour NA, Brigham TP, Richter T, et al. Causes of death of residents in ACGME-accredited programs 2000 through 2014: implications for the learning environment. *Acad Med*. 2017;92(7):976-983. doi:10.1097/ACM.0000000000001736
6. Chaukos D, Vestal HS, Bernstein CA, et al. An ounce of prevention: a public health approach to improving physician well-being. *Acad Psychiatry*. 2018;42(1):150-154. doi:10.1007/s40596-017-0751-z
7. Kelloway EK, Day AL. Building healthy workplaces: what we know so far. *Can J Behav Sci* 2005, 37 (4):223. doi:10.1037/h0087259
8. Hochschild A, Machung A. *The Second Shift: Working Families and the Revolution at Home*. New York, NY: Penguin; 2012.
9. U.S. Bureau of Labor Statistics. Labor Force Statistics from the current population Survey 2019. Accessed February 24, 2021. <https://www.bls.gov/cps/cpsaat11.htm>
10. Guille C, Frank E, Zhao Z, et al. Work-family conflict and the sex difference in depression among training physicians. *JAMA Intern Med*. 2017;177(12):1766-1772. doi:10.1001/jamainternmed.2017.5138